

Application No.10/693,730

Reply to Office Action

REMARKS

Reconsideration of the referenced application is respectfully requested in view of the foregoing amendments and the following remarks.

Status of the Application

Claims 1-16 are currently pending. The amendments presented herein sharpen the claim language for prosecution. As the amendments are supported by the specification and claims as originally filed, e.g., at pages 7 and 9 of the specification, no new matter has been added by way of these amendments.

Summary of the Office Action

The Office Action begins by rejecting claims 1-3 as anticipated by U.S. Patent 6,820,552 to Verschueren ("Verschueren").

Claims 4, 8, 9, 11, 13, 15 and 16 are rejected as obvious over Verschueren in view of U.S. Patent 6,632,472 to Louwet ("Louwet").

Claims 5-7 are rejected as obvious over Verschueren in view of U.S. Published Patent Application 2002/0083858 to MacDiarmid ("MacDiarmid").

Claims 10 and 12 are rejected as obvious over Verschueren in view Louwet as applied above, and further in view of U.S. Patent 6,827,435 to Domoto ("Domoto").

Finally, claim 14 is rejected as obvious over Verschueren in view of U.S. Patent 5,163,999 to Uchida ("Uchida").

Discussion of the Rejections***Anticipation of Claims 1-3***

Applicants traverse the anticipation rejection entered against claims 1-3.

Summarizing, Verschueren discloses the incorporation of conductive polymer compounds within the imaging layer of a printing plate, but fails to disclose the application of a fountain medium comprising a conductive polymer dispersion onto the surface of the printing plate in the manner described in the pending claims. For at least this reason, the claims are patentable over the prior art of record.

More specifically, Verschueren discloses a process for printing using a reusable substrate. Generally, the highly preferred aspect of the Verschueren process relied upon in the Office Action describes a printing plate formed from a substrate and an imaging layer located on the substrate. The imaging layer is image-wise exposed by the heat-induced coalescence of hydrophobic thermoplastic polymer particles located within the imaging layer,

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thereby providing a printing plate. The thermal coalescence can be induced by direct exposure to heat, e.g., by means of a thermal head, or by the light absorption of one or more compounds that are capable of converting light into heat. "Particularly useful light-to-heat converting compounds are for example dyes, pigments, carbon black . . . and conductive polymer dispersions such as polypyrrole, polyaniline or polythiophene-based conductive polymer dispersions." See *Verschueren*, col. 5, lines 5-24.

Verschueren, then, discloses and teaches the incorporation of the aforementioned particles within the imaging layer itself.

Indeed, the passage cited in the Office Action confirms this. Column 4, lines 50-65 of *Verschueren* describes a coating or image layer—which is capable of forming ink-accepting areas upon image-wise exposure and processing—being applied onto a substrate. In other words, this passage refers to the formation of a printing plate precursor—an image layer on a substrate—with the image layer incorporating therein the light-to-heat converting compounds as described above in column 5 of *Verschueren*.

Nowhere in *Verschueren*, however, is there any disclosure or motivation to include the aforesaid compounds in an aqueous fountain medium which is subsequently applied onto the surface of a printing plate (or in any other component other than the imaging layer).

In marked contrast, the present invention, in providing a process for the offset printing of a receiving medium with a functional pattern, comprises the steps of applying a printing ink to a printing plate and wetting said printing plate with a fountain medium comprising between 50% by weight and 100% by weight of water, said fountain medium further comprising as a solution or a dispersion at least one moiety having at least coloring, pH-indicating, whitening, fluorescent, phosphorescent, X-ray phosphor or conductive properties.

Thus, *Verschueren* does not disclose a process wherein a printing ink is applied onto a printing plate and wetting said printing plate with an aqueous fountain medium comprising a solution or a dispersion as claimed.

For at least these reasons, withdrawal of the rejection based on *Verschueren* is respectfully requested.

Obviousness Rejection of Claims 2 and 3

In addition to the foregoing arguments, and with particular regard to claims 2 and 3, there is no disclosure or suggestion in *Verschueren*, or any other art of record, of the claimed . . .

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methods, including, but not limited to, using the intrinsically conductive polymers recited therein.

Obviousness Rejection of Claims 4, 8, 9-13 and 15

Applicants respectfully traverse each of the obviousness rejections for the following reason.

As discussed above, Verschueren is fatally deficient in its teachings, and does not render any of the claims invalid as obvious, either alone or in combination.

Louwet does not provide the teaching absent in Verschueren. The Office Action itself uses Louwet as a secondary reference, purportedly teaching the use of certain conductive polymers, aprotic organic compounds, surfactants, and the like, in its process. One skilled in the art, confronted with the purported combination, would be motivated to use the Louwet components in the manner taught by Verschueren—by incorporating them into the imaging layer, as Verschueren teaches the use of such components solely as components of the imaging layer. There can be no reasonable dispute that the combination of Verschueren and Louwet fails to render the claimed invention obvious.

In specific regard to claims 10 and 12, the Office Action advises that Domoto teaches a printing device having a step subsequent to printing in which a receiving medium within 10 minutes of printing is heated to a temperature of 100°C to 250°C and to a temperature of $\leq 150^\circ\text{C}$. As this teaching fails to overcome the deficiency of Verschueren (and Louwet) as described above, claims 10 and 12 are not rendered obvious by the asserted combination.

Obviousness Rejection of Claims 5-7

The Office Action asserts that, in view of the combination of Verschueren and MacDiarmid, it would have been obvious to modify Verschueren to have the conductive polymer as taught by MacDiarmid in order to utilize a polymer with increased conductability.

As discussed above, the teaching attributed to MacDiarmid by the Office Action fails to overcome the deficiencies in Verschueren. Again, one skilled in the art having both Verschueren and MacDiarmid would be motivated to use the MacDiarmid components in the manner taught by Verschueren—by incorporating them into the imaging layer—and not by including them in an aqueous fountain medium and using the medium in the manner claimed in the pending claims.

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Obviousness Rejection of Claim 14

The Office Action asserts that Uchida teaches a fountain medium having a viscosity of 25°C after stirring to constant viscosity of 30 mPa.s as measured according to DIN 53211. As discussed above, the teaching attributed to Uchida by the Office Action fails to overcome the deficiencies in Verschueren. Again, one skilled in the art having both Verschueren and Uchida would not provide the invention as set forth in claim 14.

Conclusion

Applicants submit that the application is now in proper condition for allowance, and respectfully request that it be passed to issue. If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Date: November 29, 2005

Amendment or ROA - Regular (Revised 2005 05 11)